output queues to which the contents of the respective buffers are to be sent. A reference counter 744 decrements in response to information being read from an associated buffer. When the reference counter reaches zero, the address of the buffer is returned to free list 743. In this way, the ASIC 224 can track the available buffer locations associated with each transceiver. Information written to buffer memory is subsequently transferred to one of the output shift and hold registers 720 or 728, and held there until an internal time slot arrives in which the destination address lookup can be performed, the read from the free list memory 742 can be performed, the write to the buffer memory can be performed, and the write to the output queue can be performed.--

IN THE CLAIMS:

Please amend claims 1, 4, 9, 17, and 19-26 as follows:

1.   (Amended) An interconnect network for operation within a communication node, said network comprising:

a plurality of local line card modules configured to process information received at a plurality of speeds and formatted according to a plurality of protocols,

a selectable number of local interconnect modules connected to the local line card modules and located proximate to each other and each including local transfer elements for transferring information between a plurality of local I/O channels and for transferring information between said plurality of local I/O channels and a plurality of non-local I/O channels, and

an expanded interconnect module located proximate to said local interconnect modules

and including coupling means for electrically coupling to said non-local I/O channels, and

expanded transfer elements for transferring information between said local interconnect modules.

4.   (Amended) An interconnect network according to claim 1 further comprising

hot-swap means for changing the selected number of said local interconnect modules included in

said interconnect network, while said interconnect network is transferring information.

9.   (Amended) An interconnect network according to claim 7, wherein information

coupled into and out of said network has an associated priority, and said network further

comprises means for setting said status corresponding to a particular one of said local I/O

channels to indicate unavailability for receiving information having a particular priority, in

response to said associated queue reaching a selectable content level.

17.   (Amended) An interconnect network according to claim 1, wherein said local I/O

channels have associated destination addresses, and said expanded interconnect module includes:

array means for storing path information representative of a plurality of paths through

said expanded transfer elements over which information from a first local I/O channel of one of

said local interconnect modules can be transferred to a second local I/O channel of another one

of said local interconnect modules, and

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index means for selecting appropriate path information from said array means, at least

partially in response to a destination address of said second local I/O channel.

19.   (Amended) An interconnect network according to claim 18, wherein said local

and said expanded transfer elements each includes mode control means for selecting whether

said transfer element is to be employed in one of said local interconnect modules or in said

expanded interconnect module.

20.   (Amended) A dynamically scalable communication interconnect comprising:

a selectable number of local interconnects, each including associated transfer elements

for transferring information through said associated local interconnect, and

a single expanded interconnect, including elements for coupling to said selected number

of local interconnects, and expanded transfer elements for transferring information between said

local interconnects, wherein said selected number of local interconnects can be varied while said

expanded interconnect is transferring information.

21.   (Amended) An interconnect network for operation within a communication node,

said network comprising:

a selectable number of local interconnect modules each including local transfer elements

for transferring information between a plurality of local I/O channels and for transferring

information between said plurality of local I/O channels and a plurality of non-local I/O

channels, wherein said interconnect network is adapted for transferring information as information cells, each of said cells including groups of information words,

an expanded interconnect module including coupling means for electrically coupling to said non-local I/O channels, and expanded transfer elements for transferring information between said local interconnect modules, and

redundancy generating means for generating an alternative version of information being transferred out of said interconnect network by generating a bit-by-bit "exclusive-or" between pairs of said groups of information words included in an information cell. .

22.   (Amended) An interconnect network for operation within a communication node, said network comprising:

a selectable number of local interconnect modules each including local transfer elements for transferring information between a plurality of local I/O channels and for transferring information between said plurality of local I/O channels and a plurality of non-local I/O channels,

an expanded interconnect module including coupling means for electrically coupling to said non-local I/O channels, and expanded transfer elements for transferring information between said local interconnect modules, and

quality of service means for differentiating between information coupled into said local I/O channels based on an associated priority of said information, and for indicating unavailability

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for receiving information having a particular associated priority on one or more of said local I/O channels.

23.   (Amended) An interconnect network for operation within a communication node, said network comprising:

a selectable number of local interconnect modules each including local transfer elements for transferring information between a plurality of local I/O channels and for transferring information between said plurality of local I/O channels and a plurality of non-local I/O channels, and

at least one expanded interconnect module including coupling means for electrically coupling to said non-local I/O channels, and expanded transfer elements for transferring information between said local interconnect modules,

wherein said interconnect network is adapted for transferring information as information cells, and said local and expanded transfer elements further include clumping means for substantially simultaneously transferring a plurality of said information cells.

24.   (Amended) A dynamically bandwidth scalable communication node comprising:

a selectable number of local communication modules, each of said local communication modules including a plurality of external communication channels for coupling information into and out of said node, a plurality of internal communication channels for coupling information

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within said node, and means for coupling information between said external communication channels and said internal communication channels,

a local interconnect module, associated with each of said selectable number of local communication modules, and including local transfer elements for transferring information between said plurality of internal communication channels of said associated local communication module, and

an expanded interconnect module, including means for coupling to each of said local interconnect modules, and expanded transfer elements for transferring information between said local interconnect modules, thereby enabling transfer of information between external communication channels of different ones of said selectable number of local communication modules.

25.   (Amended) A dynamically bandwidth scalable communication node having a modular construction and comprising:

a selectable number of local communication modules, each of the local communication modules including a plurality of communication channels for transferring information into and out of said node,

a local interconnect module coupled to each of said local communication modules and including local transfer elements for transferring information between said plurality of communication channels, and

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an expanded interconnect module including elements for coupling to a plurality of said

local interconnect modules, and transfer elements for transferring information between said

plurality of local interconnect modules, wherein information can be transferred between

communication channels of different ones of said local communication modules.

26.   (Amended) A method for transferring information signals between I/O channels

of an interconnect network adapted for operation in a communication node, said method

comprising:

coupling information to I/O channels of one or more proximately located local

interconnect modules,

transferring information between I/O channels of a particular one of the local

interconnect modules in response to a local destination address,

transferring information from one of said local interconnect modules to an I/O channel of

a proximately located expanded interconnect module in response to a non-local destination

address,

transferring information from said expanded interconnect module to another particular

one of said local interconnect modules in response to said non-local destination address, and

scaling bandwidth of said interconnect network by including a selected number of said

local interconnect modules in said plurality of local interconnect modules.

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